fsrmm

fondation suisse de recherche sur les maladies musculaires
fondazione svizzera per la ricerca sulle malattie muscolari
schweiz. stiftung für die erforschung der muskelkrankheiten

Program

12th Swiss Meeting on Muscle Research

Macolin / Magglingen

4th – 6th November 2018

Vesalius (1514-64)

Organizer: Prof. Markus A. Rüegg, Biozentrum, University of Basel

Sunday, November 4th

16:00-17:30 Arrival, Check-in

17:30-18:30 Welcome Apero

18:30-19:30 Dinner

19:30-19:35 Meeting opening (Markus A. Rüegg)

19:35-20:20 Keynote lecture: Exploring skeletal muscle diversity by single fiber proteomics
Special guest: Marta Murgia, Department of Biomedical Sciences, University of Padova, Italy

Session 1: Aging **Chair: Markus A. Rüegg**

20:20-20:50 Identification of age-related modulators of protein synthesis in the muscle
Lionel Tintignac, Basel University Hospital

20:50-21:20 Aging disrupts muscle stem cell function by impairing matricellular WISP1 signals from fibro-adipogenic progenitors
Jérôme Feige, Nestle Institute of Health Sciences, EPFL, Lausanne

21:20-21:50 Mitochondrial calcium handling and tubular aggregates trigger muscle wasting in sarcopenia
Christoph Handschin, Biozentrum, University of Basel

Sponsors 2018

Monday, November 5th

Session 1: Clinical research and Therapy development - Part 1 **Chair: Alain Kälin**

8:00-8:30 Therapies in muscular dystrophies: priorities in transition from preclinical to clinical
Urs Ruegg, University of Geneva

8:30-9:00 NMR reveals how a molecule can correct specifically SMN2 exon7 splicing by 5'-splice site bulge repair
Antoine Cléry, ETH Zürich

9:00-9:30 Targeting of RNA structure in SMN2 reverses Spinal Muscular Atrophy molecular phenotypes
Leonardo Scapozza, University of Geneva

9:30-10:00 DNA aptamers as versatile tool box for developing DUX4 antagonists
Christian Klingler, Neuromuscular Research Centre, University of Basel

10:00-10:30 Coffee break

Session 1: Clinical research and Therapy development - Part 2 **Chair: Susan Treves**

10:30-11:00 Tamoxifen for treating fatal muscular dystrophies: an unexpected facet of a top-selling anticancer drug
Olivier Dorchies, University of Geneva

11:00-11:20 Motor unit action potentials analysis with a new wireless portable and multichannel surface EMG device (WPM-SEMG): preliminary results in healthy subjects
Giorgia Melli, Neurocenter of Southern Switzerland, Lugano

11:20-11:40 Pain in DMD
David Jacquier, CHUV, Lausanne

11:40-12:10 A novel antigen-specific treatment approach for multifocal motor neuropathy
Ruben Herrendorff, University of Basel

12:10-12:40 A lamin point mutation provokes Emery Dreyfuss Muscular Dystrophy in C. elegans: mode of action dissected in living worms
Susan Gasser, Friedrich Miescher Institute for Biomedical Research, Basel

12:40-14:00 Lunch

Session 2: Stem cells **Chair: Bernhard Wehrle-Haller**

14:00-14:30 Direct reprogramming of mouse fibroblasts into functional skeletal muscle progenitors
Ori Bar-Nur, ETH Zürich

14:30-15:00 3D-derivation of uncommitted human muscle stem cells from iPSCs
Omid Maschinchian, Nestlé Institute of Health Sciences, EPFL, Lausanne

15:00-15:30 Characterization of mesoangioblasts and modulation of their engraftment capacity for Duchenne Muscular Dystrophy gene therapy
Lionel Mavoungou, University of Lausanne

15:30-16:00 Molecular signature and metabolic profile of human myogenic reserve cells
Thomas Laumonier, University of Geneva

16:00-16:30 Coffee break

16:30-17:00 Inducible expression of poly-GA in cultured human neural networks causes progressive aggregation and depolarized resting membrane potential
Marian Hruska-Plochan, University of Zürich

17:00-17:10 The meaning of Telethon for muscle research in Switzerland
Philippe Rognon, Telethon Action Suisse

Poster session 1: Aging and Therapy development

17:10-19:00 POSTERS Nr. 1-12

19:00-20.30 Dinner

Evening program

20:30-22:30 free beer at poster site

Tuesday, November 6th

Session 1: Calcium signalling and disease — Chair: Francesco Zorzato

8:00-8:30 Characterization of a novel mouse model carrying a non-sense mutation in RYR1 exon36
Moran Elbaz-Kanner, Basel University Hospital

8:30-9:00 The potential role of the type 1 ryanodine receptor in acquired myopathies: application in inflammatory myopathy
Nicolas Place, University of Lausanne

9:00-9:30 The role of Store-Operated Ca2+ Entry in human myotubes
Maud Frieden, University of Geneva

9:30-10:00 Implication of TRPC1 in SOCE activated by the STIM1L isoform
Agnieska Dyrda, University of Geneva

10:00-10:30 Coffee Break

Poster session 2: Signalling and Stem cells

10:30-12:00 POSTERS Nr. 13-23

12:00-13:15 Lunch

13:15-14:00 Meeting Poster prizes committee

Session 2: Autophagy-Mitophagy **Chair: Stephane König**

14:00-14:30 Long-term dietary restriction ameliorates "mTORC1-driven" myopathy
Kathrin Chojnowska, Biozentrum University of Basel

14:30-15:00 Evidence of a novel mitophagic pathway in human skeletal muscle
Francesca Amati, University of Lausanne

15:00-15:30 Concluding remarks and poster prizes (Markus Rüegg)

15:30-16:00 Coffee break

-please remove posters now-

Departure

Poster presentations

Author	Title	Topic	Nr
Fabienne Battilana	Exercise prevented age-associated balance defects by increasing vestibular feedback to motor neurons	Aging	1
Giulia Milan	Role of the AKT/mTOR/ FoxO pathway in muscle protein homeostasis	Aging	2
Mario Romani	Enhancing mitochondrial proteostasis reduces amyloid-β proteotoxicity	Aging	3
Denis Falcetta	Pathomechanisms underlying Myotonic Dystrophy type I and potential therapeutic strategies	Therapy development	4
Hesham Ismail	Targeting NADPH oxidases in models of Duchenne muscular dystrophy	Therapy development	5
Regula Furrer	Therapeutic effects of muscle PGC-1α on dysferlinopathy	Therapy development	6
Judith Reinhard	Effect of linker protein expression on LAMA2-related muscular dystrophy	Therapy development	7

Cornelia Enzmann	A cross-sectional and longitudinal natural history study of the Swiss cohort of LAMA2-related congenital muscular dystrophy	Clinical research	8
Elinam Gayi	Tamoxifen enhances survival and improves motor function of Mtm1-null mice, a model of X-linked centronuclear myopathy	Therapy development	9
Anne Mattout	The effect of heterochromatin organization on Emery-Dreifuss muscular dystrophy (EDMD)-like phenotypes in a C. elegans model	Therapy development	10
Laurence Neff	CRISPR/Cas9-mediated genotyping of the mdx and mdx2Cv murine models of Duchenne muscular dystrophy	Animal models	11
Sven Nikolay	Characterisation of a novel mouse model carrying a non-sense mutation in RYR1 exon91	Animal models	12
Alexander Ham	Dysfunctional mTORC1 in fully-grown skeletal muscle does not lead to the severe myopathy observed in growing muscles	Signalling	13
Marco Kaiser	mTORC1-dependent increase of proteasome activity disturbs muscle proteostasis	Signalling	14
Jan Eckhardt	Extraocular muscle function is impaired in RYR3 KO mice	Calcium signalling	15
Jessica Brunetti	Study of the role of SOCE during in vitro maturation of human primary myoblasts	Calcium signalling	16
Alexis Ruiz	Metabolic effect of SRP-35 in the skeletal muscle	Signalling	17
Michael Bachmann	Binary-choice substrates as valuable tools for analyzing receptor-adapter interactions demonstrated for muscle-specific β1D integrin	Signalling	18
Kenza Fouad	Metabolic modulation of β1 integrin acetylation regulates ECM deposition and proliferation of C2C12 myoblasts	Signalling	19
Axel Tollance	Determination of the quiescence/activation mechanisms of muscle stem cells	Signalling	20
Benoît Borner	Heterogeneity of Pax7 expression in human myogenic reserve cells	Stem cells	21
Chris Donnelly	Characterization of an in vitro model to study skeletal muscle adaptations to sprint interval training in hypoxia	Muscle performance	22
Gommaar D'Hulst	POLG mutation induces mTOR hyperactivity in skeletal muscle and anabolic resistance in myogenic progenitor cells	Aging	23
Christoph Bachmann	Biochemical and epigenetic modifications occur in muscles of patients with selenoprotein N-related congenital myopathy.	Signalling	24